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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,848	04/13/2001	Gareth Geoffrey Hougham	YOR920000548US1	8391

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/834,848

Applicant(s)

HOUGHAM ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

FOURTH OFFICE ACTION

Response

1. This Fourth Office Action is in response to applicants' correspondence received June 8, 2004 and the correspondence supplying a corrected copy of the claims received November 5, 2004. Applicants' correspondence received September 14, 2004 was not entered due to informalities. Claims 16 and 17 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628).

4. Yan discloses removing mercury from liquid using capillary tubes packed with gold coated zeolite particles (e.g. see Example 2; column 8, lines 45-66). Regarding the claim limitation "deformable absorber", the mass of gold coated zeolite particles would be inherently "deformable" and also inherently act as an absorber for mercury. Regarding the claim recitation

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of intended use "for collection and transporting a quantity of spilled mercury from a spillage area", a recitation of the intended use of the claimed invention in a product claim must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, as Yan is, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Regarding the term "hand tool", it is not clear what structure is necessarily required of a "hand tool" that would distinguish it from Yan.

5. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Williston (U.S. Patent 3,232,033).

6. Williston discloses that spilled mercury becomes a hazard (e.g. column 1, lines 25-29) and uses a porous wool coated with gold to remove mercury from the environment (e.g. see column 2, lines 4-31). Regarding the claim limitation "deformable absorber", the mass of gold coated fibers would be inherently "deformable" and also inherently act as an absorber for mercury. Regarding the claim recitation of intended use "for collection and transporting a quantity of spilled mercury from a spillage area", a recitation of the intended use of the claimed invention in a product claim must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, as Williston is, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d

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937, 939, 136 USPQ 458, 459 (CCPA 1963). Regarding the term "hand tool", it is not clear what structure is necessarily required of a "hand tool" that would distinguish it from Williston.

7. Claims 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hasenpusch (German Offenlegungsschrift 3729030 A1).

8. Hasenpusch discloses removing mercury using mercury absorbent gold coated metal particles (e.g. see abstract and entire document for various materials). Regarding the claim limitation "deformable absorber", the mass of gold coated particles would be inherently "deformable" and also is specifically disclosed by Hasenpusch to act as an absorber for collecting mercury from a spillage area. Regarding the term "hand tool", it is not clear what structure is necessarily required of a "hand tool" that would distinguish it from Hasenpusch.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift

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3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387).

11. Seidenberger discloses contacting spilled mercury with a wicking transfer tool comprising porous wool coated with zinc to remove mercury from the environment (e.g. see column 2, lines 4-14). Seidenberger differs from some claims in that Seidenberger uses cheaper zinc to coat his wick instead of gold. Hasenpusch, however, clearly discloses that it is well understood in the prior art that absorbers of spilled mercury can also be plated with gold in order to quickly form an amalgam with the mercury for good clean up (e.g. see abstract and entire article). In view of Hasenpusch, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use gold to coat the wicking transfer tool of Seidenberger because Hasenpusch clearly discloses that gold is also understood in the art to be a particularly good coating material for mercury spill clean up. Seidenberger may also differ from the claims in that Seidenberger's wicking transfer tool is a wool instead of a braid. Jackson (e.g. see Figure 2) and Spirig (e.g. see Figures 1-2), however, clearly show that one of ordinary skill in the art clearly understands that liquid metal can also be absorbed by wicking tools in the braided form. This is a fairly disclosed concept that anyone in the liquid metal absorbing art would be aware of and understand. In view of Jackson and Spirig, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a braided form for the wicking tool of Seidenberger because Jackson and Spirig clearly show that braided wicking tools are understood in the art to be particularly effective at absorbing liquid metal. As further evidence that one of ordinary skill in the art understands that the use of cloths and screens to wick is conventional,

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Gunter clearly shows this concept specifically applied to the wicking of mercury is understood (e.g. column 5, lines 24-31).

Response to Arguments

12. The following paragraphs are in response to the arguments received from applicants on June 8, 2004.

13. Regarding the rejection of product claim 16 under 35 U.S.C. 102(b) as being anticipated by Yan (U.S. Patent 5,322,628), Williston (U.S. Patent 3,232,033), applicant argues that these references address the removal of mercury vapor and not mercury spillage. The examiner notes, however, that the recitation the use "for collection and transporting a quantity of spilled mercury from a spillage area" in product claim 16 is an "intended use". A recitation of the intended use of the claimed invention in a product claim must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, as Williston is, then it meets the claim. The structures of Yan and Williston are certainly as capable of removing mercury spillage as applicant's structure and therefore Yan and Williston anticipate product claim 16 regardless of applicant's stated "intended use". See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

14. Regarding the rejection of claims 16 and 17 under 35 U.S.C. 102(b) as being anticipated and Hasenpusch (German Offenlegungsschrift 3729030 A1), applicant indicates that Hasenpusch

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discloses absorbing mercury from vapor. Applicant's interpretation of Hasenpusch is in error since Hasenpusch clearly discloses recovering mercury residue from spillage areas.

15. Regarding the rejection of the claim under 35 U.S.C. 103(a) as being unpatentable over Seidenberger (U.S. Patent 4,076,553) in view of Hasenpusch (German Offenlegungsschrift 3729030 A1), and further in view of Jackson (U.S. Patent 3,715,797) or Spirig (U.S. Patent 4,416,408), and further in view of Gunter (U.S. Patent 4,125,387), applicant has not presented any detailed rationale as to why this rejection is not proper. Applicant simply mentions the teachings of each reference. However, one cannot show non-obviousness by attacking the references individually where the rejection is based on a combination of references, *In re Young*, 159 USPQ 725 (CCPA 1968). No argument from applicant has been presented which specifically addresses the merits of the references as they are combined in this rejection or any specific error in the examiner's rationale for combination.

Conclusion

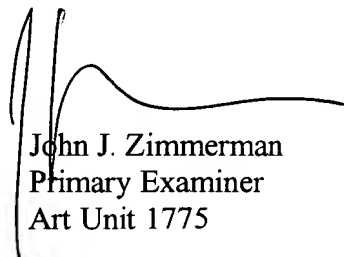
16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
February 15, 2005